

October 24, 2005
Project 03187-0



U.S. Environmental Protection Agency
RGP-NOC Processing
Municipal Assistance Unit (CMU)
One Congress Street, Suite 1100
Boston, MA 02114-2023

Geotechnical
Environmental and
Water Resources
Engineering

Dear Sir or Madam:

**Re: Notice of Intent
Remediation General Permit
One First Street
Cambridge, MA**

On behalf of First Street Venture, L.L.C., we are submitting the enclosed National Pollutant Discharge Elimination System (NPDES) Notice of Intent (NOI) for coverage under the Remediation General Permit for construction dewatering being performed at One First Street in Cambridge, Massachusetts. Constructing dewatering is currently being performed and discharged under a NPDES exclusion letter (MA-041-070).

The NOI and associated supporting documentation have been prepared in accordance with EPA guidance.

- We have included two sets of chemical testing results to support the NOI. One set of data represents the most recent influent sample collected during construction dewatering. The other set of data represents a groundwater sample collected from a well in the area where most of the remaining construction dewatering will be performed. In Section 3b of the NOI application, we have provided the laboratory reporting limits in the column "Minimum Level of Test Method."
- We have included two NOI application signature pages. One signature page is from the facility owner, First Street Venture, L.L.C. and the second is from the operator, John Moriarty & Associates, Inc.

I can be reached at 781.721.4071 or pkking@geiconsultants.com if you have any questions or require additional information.

Sincerely,

GEI CONSULTANTS, INC.



Patrick King, P.E.
Project Manager

PPK:lek
Enclosures

c. Robert Greetham, Leggat McCall Properties
Jamie Noon, John Moriarty & Associates
M:\PROJECT\2003\03187\NOI_application.doc

Notice of Intent (NOI) for the Remediation General Permit

1. General site information. Please provide the following information about the site:

a) Name of facility/site: One First Street		Facility/site address:	
Location of facility/site: longitude: <u>71.08</u> latitude: <u>42.37</u>	Facility SIC code(s): N/A	Street: One First Street	
b) Name of facility/site owner: First Street Venture, L.L.C.		Town: Cambridge	
Email address of owner: robert.greetham@lmp.com		State: MA	Zip: 02141
Telephone no. of facility/site owner: (617) 422-7014		County: Middlesex	
Fax no. of facility/site owner: (617) 556-9714		Owner is (check one): 1. Federal____ 2. State/Tribal____	
Address of owner (if different from site):		3. Private <input checked="" type="checkbox"/> 4. other, if so, describe:	
Street: 10 Post Office Square			
Town: Boston	State: MA	Zip: 02109	County: Suffolk
c) Legal name of operator: John Moriarty & Associates, Inc.	Operator telephone no: (617) 234-4600		
	Operator fax no.: (617) 234-4455		Operator email: jnoon@jm-a.com
Operator contact name and title: Jamie Noon, Project Manager			

Address of operator (if different from owner):	Street: 25 First Street Suite 106		
Town: Cambridge	State: MA	Zip: 02141	County: Middlesex

d) Check "yes" or "no" for the following:

1. Has a prior NPDES permit exclusion been granted for the discharge? Yes ☒ No ☐, if "yes," number: MA-041-070

2. Has a prior NPDES application (Form 1 & 2C) ever been filed for the discharge? Yes ☐ No ☒, if "yes," date and tracking #:

3. Is the discharge a "new discharge" as defined by 40 CFR 122.2? Yes ☐ No ☒

4. For sites in Massachusetts, is the discharge covered under the MA Contingency Plan (MCP) and exempt from state permitting? Yes ☒ No ☐ RTN 3-23227

<p>e) Is site/facility subject to any State permitting or other action which is causing the generation of discharge? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p> <p>If "yes," please list:</p> <p>1. site identification # assigned by the state of NH or MA:</p> <p>2. permit or license # assigned:</p> <p>3. state agency contact information: name, location, and telephone number:</p>	<p>f) Is the site/facility covered by any other EPA permit, including:</p> <p>1. multi-sector storm water general permit? Y <input type="checkbox"/> N <input checked="" type="checkbox"/>, if Y, number:</p> <p>2. phase I or II construction storm water general permit? Y <input type="checkbox"/> N <input checked="" type="checkbox"/>, if Y, number:</p> <p>3. individual NPDES permit? Y <input type="checkbox"/> N <input checked="" type="checkbox"/>, if Y, number:</p> <p>4. any other water quality related permit? Y <input type="checkbox"/> N <input checked="" type="checkbox"/>, if Y, number:</p>
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2. Discharge information. Please provide information about the discharge, (attaching additional sheets as needed) including:

<p>a) Describe the discharge activities for which the owner/applicant is seeking coverage:</p> <p>Construction dewatering - general "urban fill" site</p>		
b) Provide the following information about each discharge:	<p>1) Number of discharge points:</p> <p>1</p>	<p>2) What is the maximum and average flow rate of discharge (in cubic feet per second, ft³/s)? Max. flow <u>0.17</u></p> <p>Average flow <u>0.07</u> Is maximum flow a design value? Y <input checked="" type="checkbox"/> N <input type="checkbox"/> (based on filter capacity)</p> <p>For average flow, include the units and appropriate notation if this value is a design value or estimate if not available.</p> <p>Average flow of 0.7 cfs (30 gpm) is an estimated value.</p>
<p>3) Latitude and longitude of each discharge within 100 feet: pt.1: long. <u>71.08</u> lat. <u>42.37</u> ; pt.2: long. _____ lat. _____; pt.3: long. _____ lat. _____; pt.4: long. _____ lat. _____; pt.5: long. _____ lat. _____; pt.6: long. _____ lat. _____; pt.7: long. _____ lat. _____; pt.8: long. _____ lat. _____; etc.</p>		

4) If hydrostatic testing, total volume of the discharge (gals): N/A	5) Is the discharge intermittent <input checked="" type="checkbox"/> or seasonal _____? Is discharge ongoing Yes <input checked="" type="checkbox"/> No _____?
c) Expected dates of discharge (mm/dd/yy): start <u>11/01/05</u> end <u>12/31/05</u>	
d) Please attach a line drawing or flow schematic showing water flow through the facility including: 1. sources of intake water, 2. contributing flow from the operation, 3. treatment units, and 4. discharge points and receiving waters(s). See attached Figure 1.	

3. Contaminant information. In order to complete this section, the applicant will need to take a minimum of one sample of the untreated water and have it analyzed for **all** of the parameters listed in Appendix III. Historical data, (i.e., data taken no more than 2 years prior to the effective date of the permit) may be used if obtained pursuant to: i. Massachusetts' regulations 310 CMR 40.0000, the Massachusetts Contingency Plan ("Chapter 21E"); ii. New Hampshire's Title 50 RSA 485-A: Water Pollution and Waste Disposal or Title 50 RSA 485-C: Groundwater Protection Act; or iii. an EPA permit exclusion letter issued pursuant to 40 CFR 122.3, provided the data was analyzed with test methods that meet the requirements of this permit. Otherwise, a new sample shall be taken and analyzed.

a) Based on the analysis of the sample(s) of the untreated influent, the applicant must check the box of the sub-categories that the potential discharge falls within.

Gasoline Only	VOC Only	Primarily Metals	Urban Fill Sites <input checked="" type="checkbox"/>	Contaminated Sumps	Mixed Contaminants	Aquifer Testing
Fuel Oils (and Other Oils) only	VOC with Other Contaminants	Petroleum with Other Contaminants	Listed Contaminated Sites	Contaminated Dredge Condensates	Hydrostatic Testing of Pipelines/Tanks	Well Development or Rehabilitation

b) Based on the analysis of the untreated influent, the applicant must indicate whether each listed chemical is **believed present** or **believed absent** in the potential discharge. Attach additional sheets as needed.

PARAMETER	Believe Absent	Believe Present	# of Samples (1 minimum)	Type of Sample (e.g., grab)	Analytical Method Used (method #)	Minimum Level of Test Method (ug/l)	Maximum daily value		Avg. daily value	
							concentration (ug/l)	mass (kg)	concentration (ug/l)	mass (kg)
1. Total Suspended Solids		<input checked="" type="checkbox"/>	2	Grab	160.2	4000	8,660,000	3,540	4,332,000	708
2. Total Residual Chlorine	<input checked="" type="checkbox"/>		1	Grab	330.4	50	ND	----	ND	----
3. Total Petroleum Hydrocarbons		<input checked="" type="checkbox"/>	2	Grab	1664/ 846	4,100 / 220	581	0.238	291	0.0475
4. Cyanide	<input checked="" type="checkbox"/>		1	Grab	335.3	10	ND	----	ND	----
5. Benzene	<input checked="" type="checkbox"/>		1	Grab	8260B	0.50	ND	----	ND	----
6. Toluene	<input checked="" type="checkbox"/>		1	Grab	8260B	1.0	ND	----	ND	----
7. Ethylbenzene	<input checked="" type="checkbox"/>		1	Grab	8260B	1.0	ND	----	ND	----
8. (m,p,o) Xylenes	<input checked="" type="checkbox"/>		1	Grab	8260B	1.0	ND	----	ND	----
9. Total BTEX ⁴	<input checked="" type="checkbox"/>		1	Grab	8260B	----	ND	----	ND	----

⁴BTEX = Sum of Benzene, Toluene, Ethylbenzene, total Xylenes.

PARAMETER	Believe Absent	Believe Present	# of Samples (1 minimum)	Type of Sample (e.g., grab)	Analytical Method Used (method #)	Minimum Level (ML) of Test Meth(ug/l)	Maximum daily value		Avg. daily value	
							concentration (ug/l)	mass (kg)	concentration (ug/l)	mass (kg)
10. Ethylene Dibromide (1,2- Dibromo-methane)	✓		1	Grab	504	0.015	ND	----	ND	----
11. Methyl-tert-Butyl Ether (MtBE)	✓		1	Grab	8260B	1.0	ND	----	ND	----
12. tert-Butyl Alcohol (TBA)	✓		1	Grab	8260B	100	ND	----	ND	----
13. tert-Amyl Methyl Ether (TAME)	✓		1	Grab	8260B	2.0	ND	----	ND	----
14. Naphthalene	✓		2	Grab	8260B	5.0	ND	----	ND	----
15. Carbon Tetra-chloride	✓		1	Grab	8260B	1.0	ND	----	ND	----
16. 1,4 Dichlorobenzene	✓		1	Grab	8260B	1.0	ND	----	ND	----
17. 1,2 Dichlorobenzene	✓		1	Grab	8260B	1.0	ND	----	ND	----
18. 1,3 Dichlorobenzene	✓		1	Grab	8260B	1.0	ND	----	ND	----
19. 1,1 Dichloroethane	✓		1	Grab	8260B	1.0	ND	----	ND	----
20. 1,2 Dichloroethane	✓		1	Grab	8260B	1.0	ND	----	ND	----
21. 1,1 Dichloroethylene	✓		1	Grab	8260B	1.0	ND	----	ND	----
22. cis-1,2 Dichloro-ethylene	✓		1	Grab	8260B	1.0	ND	----	ND	----
23. Dichloromethane (Methylene Chloride)	✓		1	Grab	8260B	2.0	ND	----	ND	----
24. Tetrachloroethylene	✓		1	Grab	8260B	1.0	ND	----	ND	----

PARAMETER	Believe Absent	Believe Present	# of Samples (1 minimum)	Type of Sample (e.g., grab)	Analytical Method Used (method #)	Minimum Level (ML) of Test Method (ug/l)	Maximum daily value		Avg. daily Value	
							concentration (ug/l)	mass (kg)	concentration (ug/l)	mass (kg)
25. 1,1,1 Trichloroethane	✓		1	Grab	8260B	1.0	ND	----	ND	----
26. 1,1,2 Trichloroethane	✓		1	Grab	8260B	1.0	ND	----	ND	----
27. Trichloroethylene	✓		1	Grab	8260B	1.0	ND	----	ND	----
28. Vinyl Chloride	✓		1	Grab	8260B	1.0	ND	----	ND	----
29. Acetone		✓	2	Grab	8260B	5.0	30.3	0.0124	15.2	0.0025
30. 1,4 Dioxane	✓		1	Grab	8260B	2.5	ND	----	ND	----
31. Total Phenols	✓		1	Grab	8270C	5.2	ND	----	ND	----
32. Pentachlorophenol	✓		1	Grab	8270C	10	ND	----	ND	----
33. Total Phthalates ⁵ (Phthalate esters)	✓		1	Grab	8270C	----	ND	----	ND	----
34. Bis (2-Ethylhexyl) Phthalate [Di-(ethylhexyl) Phthalate]	✓		1	Grab	8270C	10	ND	----	ND	----
35. Total Group I Polycyclic Aromatic Hydrocarbons (PAH)	✓		2	Grab	8270C	----	ND	----	ND	----
a. Benzo(a) Anthracene	✓		2	Grab	8270C	5	ND	----	ND	----
b. Benzo(a) Pyrene	✓		2	Grab	8270C	5	ND	----	ND	----
c. Benzo(b)Fluoranthene	✓		2	Grab	8270C	5	ND	----	ND	----
d. Benzo(k) Fluoranthene	✓		2	Grab	8270C	5	ND	----	ND	----
e. Chrysene	✓		2	Grab	8270C	5	ND	----	ND	----

⁵The sum of individual phthalate compounds.

PARAMETER	Believe Absent	Believe Present	# of Samples (1 minimum)	Type of Sample (e.g., grab)	Analytical Method Used (method #)	Minimum Level (ML) of Test Meth (ug/l)	Maximum daily value		Average daily value	
							concentration (ug/l)	mass (kg)	concentration (ug/l)	mass (kg)
f. Dibenzo(a,h) anthracene	✓		2	Grab	8270C	5	ND	----	ND	----
g. Indeno(1,2,3-cd) Pyrene	✓		2	Grab	8270C	5	ND	----	ND	----
36. Total Group II Polycyclic Aromatic Hydrocarbons (PAH)	✓		2	Grab	8270C	----	ND	----	ND	----
h. Acenaphthene	✓		2	Grab	8270C	5	ND	----	ND	----
i. Acenaphthylene	✓		2	Grab	8270C	5	ND	----	ND	----
j. Anthracene	✓		2	Grab	8270C	5	ND	----	ND	----
k. Benzo(ghi) Perylene	✓		2	Grab	8270C	5	ND	----	ND	----
l. Fluoranthene	✓		2	Grab	8270C	5	ND	----	ND	----
m. Fluorene	✓		2	Grab	8270C	5	ND	----	ND	----
n. Naphthalene-	✓		2	Grab	8270C	5	ND	----	ND	----
o. Phenanthrene	✓		2	Grab	8270C	5	ND	----	ND	----
p. Pyrene	✓		2	Grab	8270C	5	ND	----	ND	----
37. Total Polychlorinated Biphenyls (PCBs)	✓		1	Grab	608	----	ND	----	ND	----
38. Antimony	✓		1	Grab	200.7	6.0	0	----	0	----
39. Arsenic		✓	2	Grab	200.7	5.0	133	0.0544	66.5	0.0109
40. Cadmium	✓		1	Grab	200.7	4.0	0	----	0	----
41. Chromium III	✓		1	Grab	200.7	10.0	0	----	0	----
42. Chromium VI	✓		1	Grab	200.7	10.0	0	----	0	----

PARAMETER	Believe Absent	Believe Present	# of Samples (1 minimum)	Type of Sample (e.g., grab)	Analytical Method Used (method #)	Minimum Level (ML) of Test Meth(ug/l)	Maximum daily value		Avg. daily value	
							concentration (ug/l)	mass (kg)	concentration (ug/l)	mass (kg)
43. Copper	✓		1	Grab	200.7	25	0	----	0	----
44. Lead	✓		1	Grab	200.7	5.0	0	----	0	----
45. Mercury	✓		1	Grab	245.1	.020	0	----	0	----
46. Nickel	✓		1	Grab	200.7	40	0	----	0	----
47. Selenium	✓		1	Grab	200.7	10	0	----	0	----
48. Silver	✓		1	Grab	200.7	5.0	0	----	0	----
49. Zinc	✓		1	Grab	200.7	20	0	----	0	----
50. Iron	✓		1	Grab	200.7	100	0	----	0	----
Other (describe):										

c) For discharges where **metals** are believed present, please fill out the following:

<p><i>Step 1:</i> Do any of the metals in the influent have a reasonable potential to exceed the effluent limits in Appendix III (i.e., the limits set at zero to five dilutions)? Y <input checked="" type="checkbox"/> N <input type="checkbox"/></p>	<p>If yes, which metals? Arsenic</p>
<p><i>Step 2:</i> For any metals which have reasonable potential to exceed the Appendix III limits, calculate the dilution factor (DF) using the formula in Part I.A.3.c) (step 2) of the NOI instructions or as determined by the State prior to the submission of this NOI. What is the dilution factor for applicable metals? Metals: <u>Arsenic</u> (SEE NOTE 1 IN SECTION 7) DF: <u>76.6</u></p>	<p>Look up the limit calculated at the corresponding dilution factor in Appendix IV. Do any of the metals in the influent have the potential to exceed the corresponding effluent limits in Appendix IV (i.e., is the influent concentration above the limit set at the calculated dilution factor)? Y <input type="checkbox"/> N <input checked="" type="checkbox"/> If "Yes," list which metals:</p>

4. Treatment system information. Please describe the treatment system using separate sheets as necessary, including:

<p>a) A description of the treatment system, including a schematic of the proposed or existing treatment system:</p> <p>Water is collected from various sources on the project site and pumped into a fractionalizing tank. Water from the tank is then pumped through bag filters and then flows through a flow meter. The water is then discharged to a street surface storm water catch basin. See attached Figures 2, 3, and 4.</p>						
b) Identify each applicable treatment unit (check all that apply):	Frac. tank ✓	Air stripper	Oil/water separator	Equalization tanks	Bag filter ✓	GAC filter
	Chlorination	Dechlorination	Other (please describe):			
<p>c) Proposed average and maximum flow rates (gallons per minute) for the discharge and the design flow rate(s) (gallons per minute) of the treatment system: Average flow rate of discharge <u>30 gpm</u> Maximum flow rate of treatment system <u>75 gpm</u> Design flow rate of treatment system <u>75 gpm</u></p>						
<p>d) A description of chemical additives being used or planned to be used (attach MSDS sheets):</p> <p>NONE</p>						

5. Receiving surface water(s). Please provide information about the receiving water(s), using separate sheets as necessary:

a) Identify the discharge pathway:	Direct_____	Within facility__	Storm drain <u>✓</u>	River/brook _____	Wetlands _____	Other (describe):
<p>b) Provide a narrative description of the discharge pathway, including the name(s) of the receiving waters:</p> <p>Water is discharged to a storm drain on Otis Street in Cambridge, MA. From there the water flows approximately 600 feet underground and is then discharged to the Charles River.</p>						

c) Attach a detailed map(s) indicating the site location and location of the outfall to the receiving water:

1. For multiple discharges, number the discharges sequentially.

2. For indirect dischargers, indicate the location of the discharge to the indirect conveyance and the discharge to surface water

The map should also include the location and distance to the nearest sanitary sewer as well as the locus of nearby sensitive receptors (based on USGS topographical mapping), such as surface waters, drinking water supplies, and wetland areas. SEE ATTACHED FIGURES 2, 3, AND 4

d) Provide the state water quality classification of the receiving water "B"

e) Provide the reported or calculated seven day-ten year low flow (7Q10) of the receiving waters 14.3 cfs (See note 2 in Section 7)

Please attach any calculation sheets used to support stream flow and dilution calculations.

f) Is the receiving water a listed 303(d) water quality impaired or limited water? Yes ☒ No ☐ If yes, for which pollutant(s)?
metals, priority organics, nutrients, organic enrichment / low DO, pathogens, oil & grease, taste, color, odor, noxious aquatic plants, turbidity

Is there a TMDL? Yes ☐ No ☒ If yes, for which pollutant(s)?

6. Results of Consultation with Federal Services: Please provide the following information according to requirements of Part I.B.4 and Appendices II and VII.

a) Are any listed threatened or endangered species, or designated critical habitat, in proximity to the discharge? Yes ☐ No ☒

Has any consultation with the federal services been completed? No ☐ or is consultation underway? Yes ☐ No ☐

What were the results of the consultation with the U.S. Fish and Wildlife Service and/or National Marine Fisheries Service (check one):

a "no jeopardy" opinion? ☐ or written concurrence ☐ on a finding that the discharges are not likely to adversely affect any endangered species or critical habitat?

b) Are any historic properties listed or eligible for listing on the National Register of Historic Places located on the facility or site or in proximity to the discharge?

Yes ☐ No ☒ Have any state or tribal historic preservation officer been consulted in this determination (Massachusetts only)? Yes ☒ No ☐

7. Supplemental information. :

Please provide any supplemental information. Attach any analytical data used to support the application. Attach any certification(s) required by the general permit.

Notes:

#1. The dilution factor has been calculated as follows: $DF = [(Q_d + Q_s) / Q_d] \times 0.9$ where Q_d is the maximum flow rate of the discharge in cfs (0.17), and where Q_s is the minimum flow for 7 consecutive days with a recurrence interval of 10 years ($7Q_{10} = 14.3$ cfs - see note #2 below for information on the $7Q_{10}$ value). Therefore, the dilution factor, $DF = [(0.17 + 14.3) / 0.17] \times 0.9 = 76.6$.

#2. The $7Q_{10}$ value for the receiving water body was obtained from USGS Water Resources Investigations Report 88-4173 (pg 9). The $7Q_{10}$ value provided, 14.3 cfs, is for the Charles River in Waltham. This value is believed to be conservative as the USGS Waltham stream gage is located approximately 10 miles upstream from the project site.

#3. Determination that no listed species or critical habitat are in proximity to the project site and discharge location was made through the following steps:

- Reviewing the Natural Heritage and Endangered Species Program's "Rare Species Occurance" list for Cambridge (www.mass.gov/dfwele/dfw/nhesp/nhtown.htm)
- Reviewing the list of Areas of Critical Environmental Concern (ACEC) (www.epa.gov/region/npdes/remediation/Appendix-I-list-n-map.pdf)
- Reviewing the Natural Heritage and Endangered Species Program's "Biomap" available at www.massgis.state.ma.us/biormap/viewer.htm

#4. Attachments to this application include the following:

- Laboratory test data for sample 031870-GEI101 (sample date Oct 10, 2005).
- Laboratory test data for sample 031870-FRAC-IN-101105 (sampled on Oct 11, 2005).
- Site location map
- Treatment system schematic
- Extract from the City of Cambridge Sewer and Drain Atlas, indicating the location of treatment facilities, discharge point, and outfall location.
- Map of separated catchment areas and municipal stormwater outfall locations for the City of Cambridge, dated March 2004, indicating the site location and outfall location.
- Massachusetts DEP site scoring map (dated September 2004) for the project site. This map was originally published in GEI report "Phase I Initial Site Investigation and Tier Classification", dated September 21, 2004.

8. **Signature Requirements:** The Notice of Intent must be signed by the operator in accordance with the signatory requirements of 40 CFR Section 122.22, including the following certification:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, I certify that the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I certify that I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Facility/Site Name: One First Street, Cambridge, MA

Operator signature:



Title:

PROJECT MANAGER (owner)

Date:

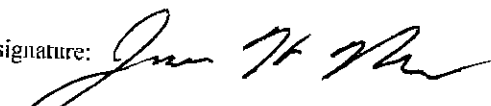
10.25.05

8. Signature Requirements: The Notice of Intent must be signed by the operator in accordance with the signatory requirements of 40 CFR Section 122.22, including the following certification:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, I certify that the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I certify that I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Facility/Site Name: One First Street, Cambridge, MA

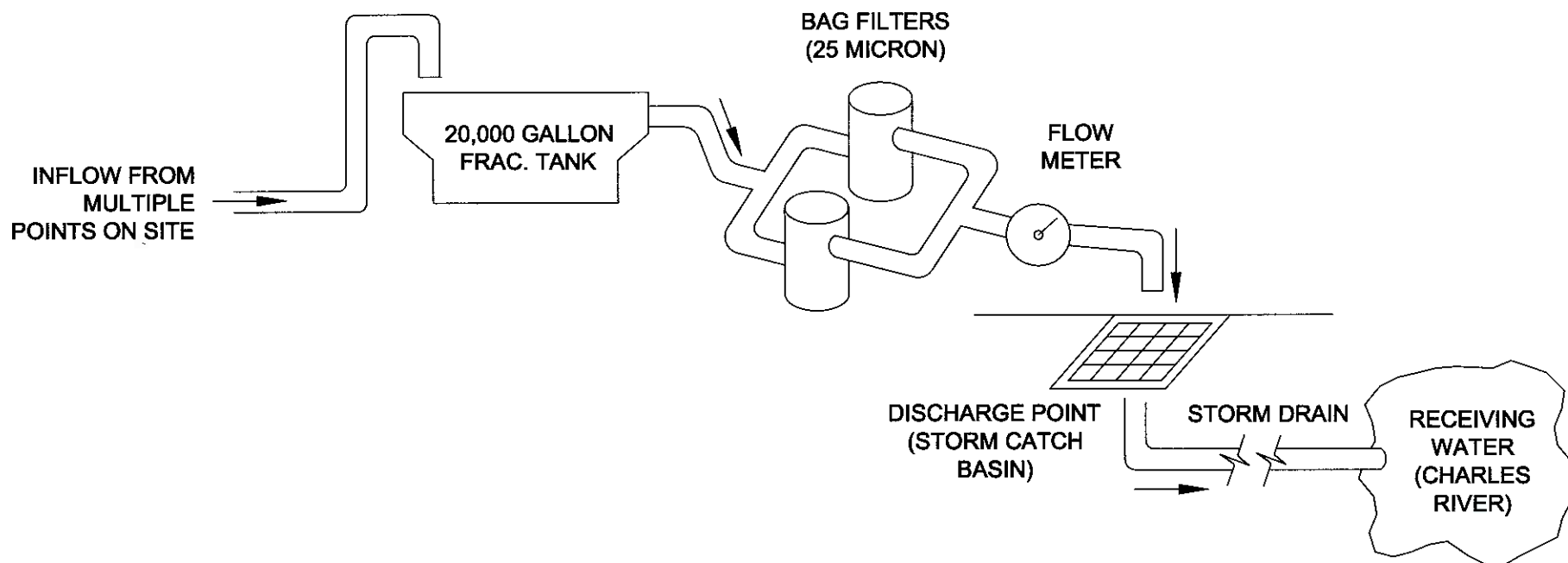
Operator signature:



Title:

Project manager

Date: 10-25-05



NOTE TO SCALE

One First Street
Cambridge, Massachusetts

First Street Venture, LLC

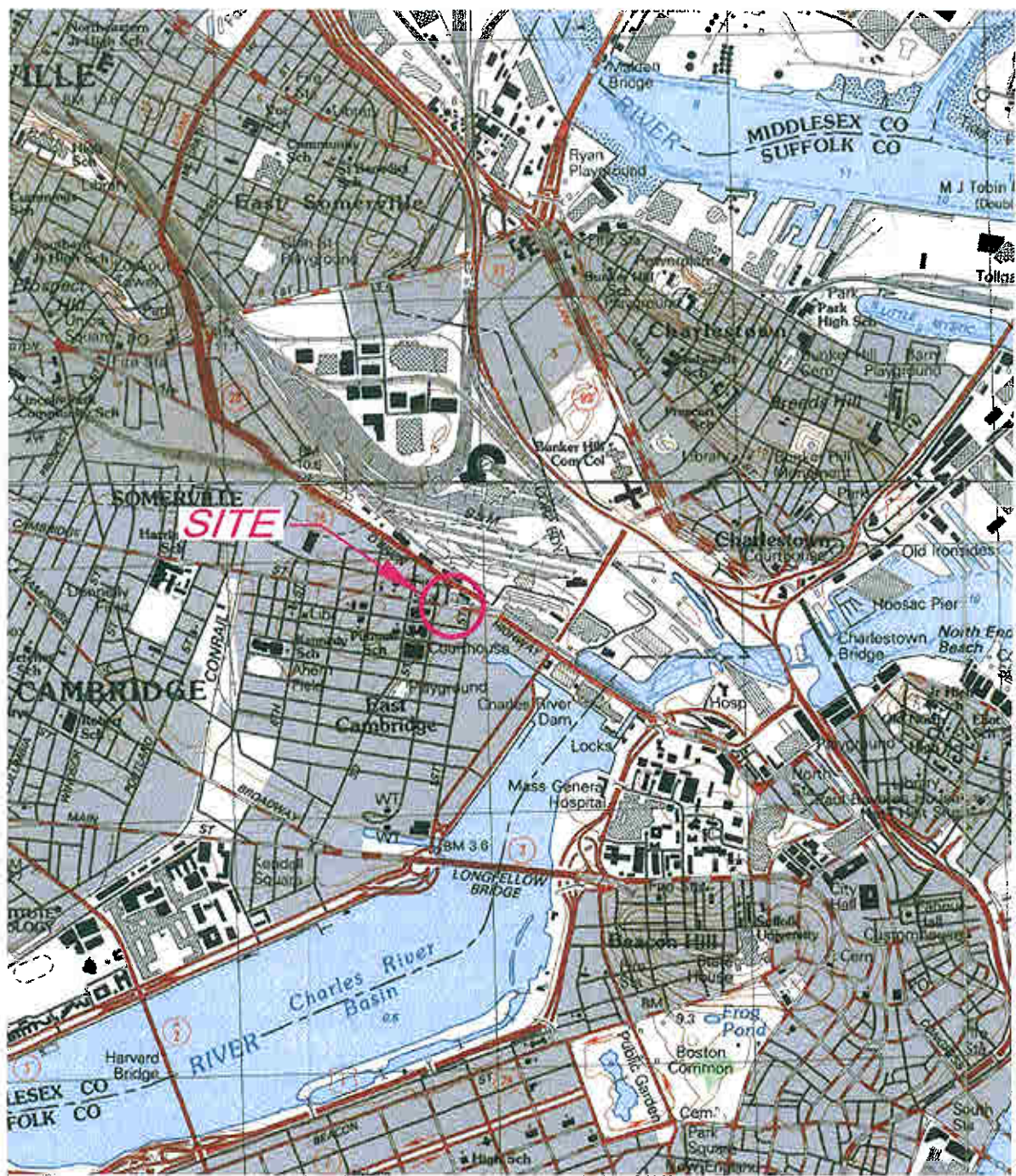


Project 03187-0

TREATMENT SYSTEM
SCHEMATIC

October 24, 2005

Fig. 1



0 1000 2000 4000 6000
SCALE, FEET

This Map Image provided by MassGIS is taken from U.S.G.S. Topographic 7.5 x 15 Minute Series Boston North, MA Quadrangle, 1987. Datum is National Geodetic Vertical Datum (NGVD). Contour Interval is 3 Meters.



One First Street
Cambridge, Massachusetts

First Street Venture, LLC

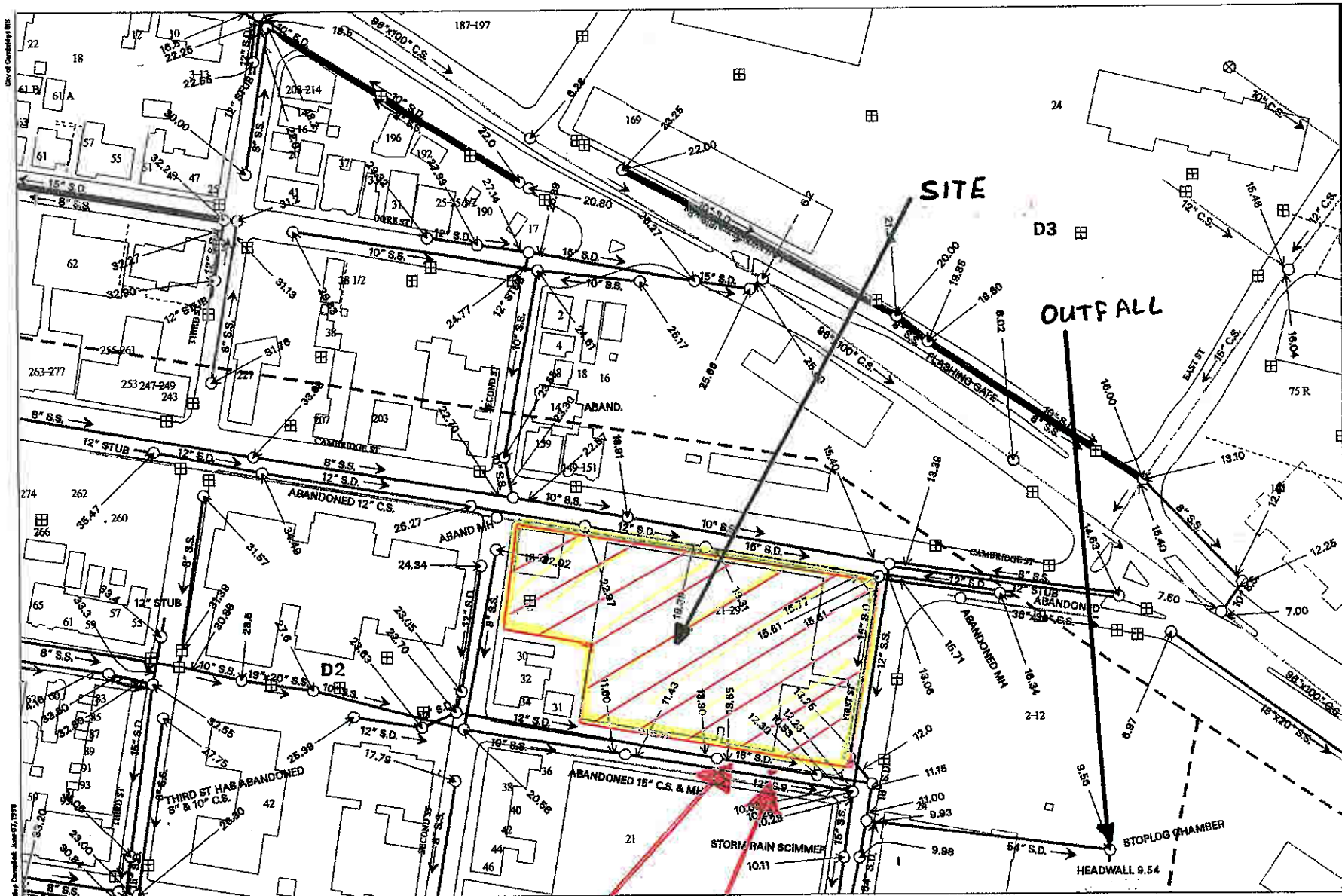


Project 031870

SITE LOCATION MAP

October 2005

Figure 2



Map Number: 7889604

Tile Number: 51.4

City of Cambridge, Massachusetts
Sewer and Drain Atlas

FIGURE 3

CITY OF CAMBRIDGE
**SEPARATED CATCHMENT AREAS AND
MUNICIPAL STORMWATER OUTFALL LOCATIONS**
MARCH 2004

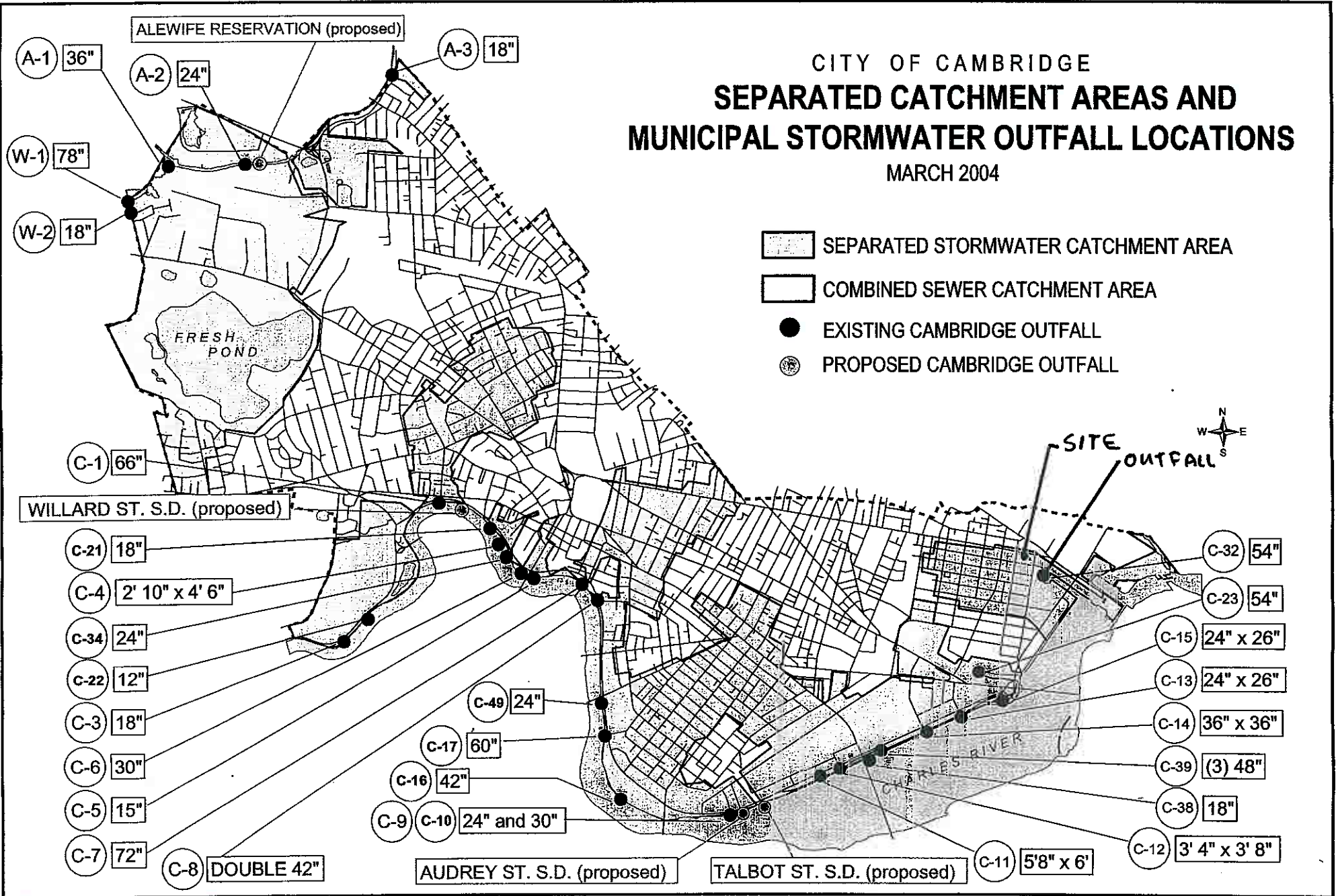


FIGURE 4

MA DEP - Bureau of Waste Site Cleanup

Site Scoring Map: 500 feet & 0.5 Mile Radii

SITE NAME:

First Street Venture
One First Street
CAMBRIDGE, MA 02141
4692789n 328981ew



Site Location

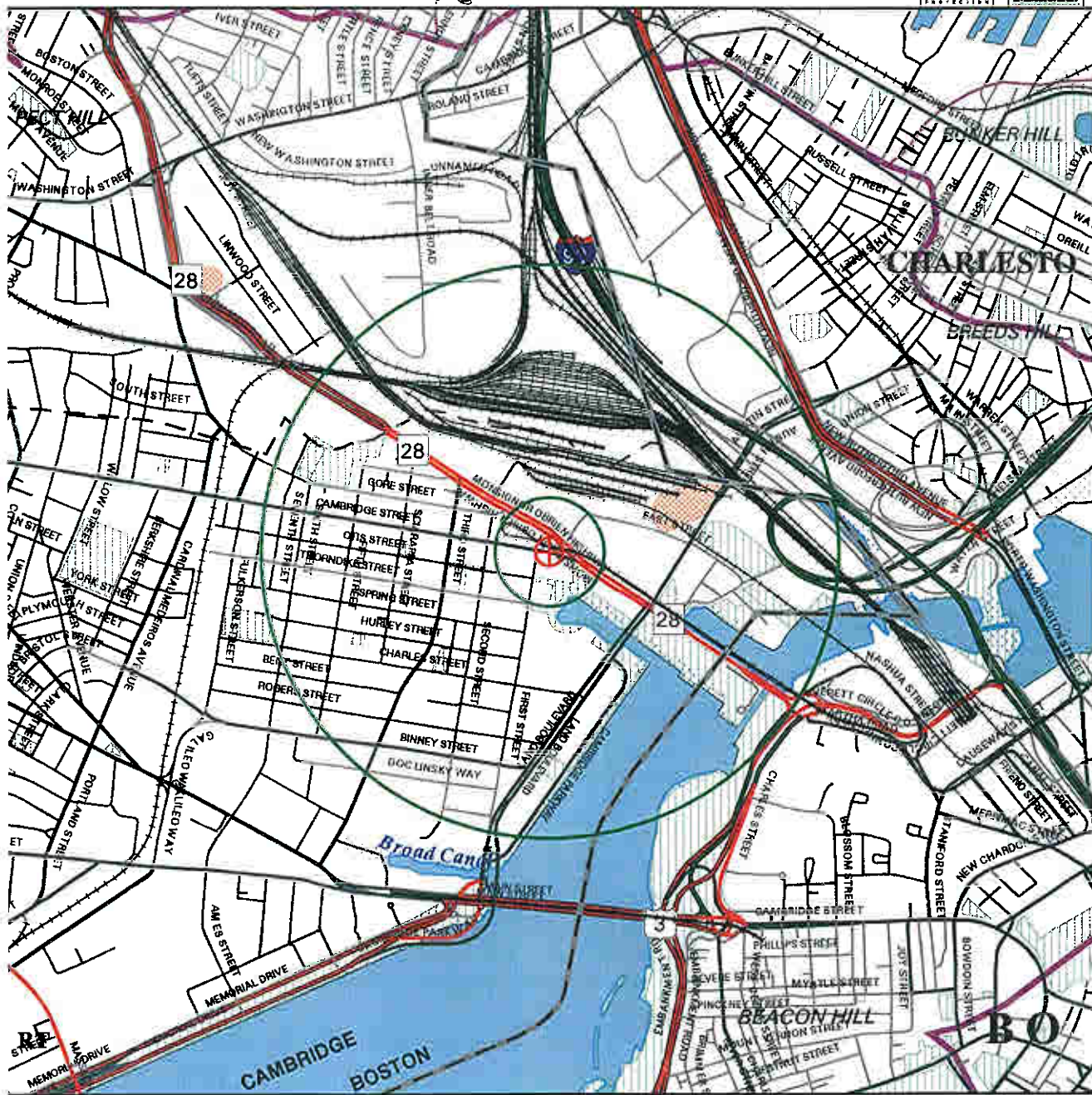
The information shown on this map is the best available at the date of printing. Please refer to the data source descriptions document.



Massachusetts
Geographic
Information
System



Massachusetts Executive Office of Environmental Affairs - 2004



Roads: Limited Access, Divided, Major Road, Connector, Street, Track, Trail
Boundaries: Town, County, DEP Region; Train; Powerline; Pipeline; Aqueduct
Basins: Major, Sub; Streams: Perennial, Intermittent, Man Made Shores, Dams
Potentially Productive Aquifers: Medium, High Yield
Non-Potential Drinking Water Source Area: Medium, High Yield

EPA Sole Source Aquifer; FEMA 100-year floodplain
Public Water Supplies: Ground, Surface, Non Community
Approved Zone 2; NVPA; Surface Water Supply Zone A
Hydrography: Water Features, Public Surface Water Supply
Wetlands: Fresh, Salt, NHEPS Wetlands Habitat
Protected Open Space; ACEC
DEP Permitted Solid Waste Facilities; Certified Vernal Pools



August 24, 2004

Phase I Report and Tier Classification
One First Street
Cambridge, Massachusetts

First Street Venture, LLC



Project 031870

Mass GIS Map
FIGURE 5

September 2004

Fig. 3

FIGURE 5



New England
ACCUTEST.
Laboratories

10/24/05

Technical Report for

GEI Consultants, Inc.

One First Street, Cambridge, MA

031870

Accutest Job Number: M51602

Sampling Date: 10/11/05

Report to:

GEI Consultants, Inc.

RPeary@geiconsultants.com

ATTN: Richard Peary

Total number of pages in report: 38



Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.


Reza Fand
Lab Director

Certifications: MA (M-MA136) CT (PH-0109) NH (250204) RI (00071) ME (MA136) FL (E87579)
NY (23346) NJ (MA926) NAVY USACE

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Accutest Laboratories

Sample Summary

GEI Consultants, Inc.

Job No: M51602

One First Street, Cambridge, MA
Project No: 031870

Sample Number	Collected Date	Time By	Received	Matrix Code Type	Client Sample ID
------------------	-------------------	---------	----------	---------------------	---------------------

~~M51602-1 10/11/05 11:45 RLP 10/11/05 AQ Surface Water 031870-FRAC-OUT-101105~~

N/A

M51602-2 10/11/05 11:30 RLP 10/11/05 AQ Surface Water 031870-FRAC-IN-101105

Report of Analysis

Page 1 of 1

2.1

2

Client Sample ID: 031870-FRAC-OUT-101105
 Lab Sample ID: M51602-1
 Matrix: AQ - Surface Water
 Method: SW846 8260B
 Project: One First Street, Cambridge, MA

Date Sampled: 10/11/05
 Date Received: 10/11/05
 Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	P2436.D	1	10/20/05	AMY	n/a	n/a	MSP81
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	11.4	5.0	ug/l	B
91-20-3	Naphthalene	ND	5.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	107%		82-127%
2037-26-5	Toluene-D8	101%		88-112%
460-00-4	4-Bromofluorobenzene	102%		80-118%

ND = Not detected
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Page 1 of 1

2.1

2

Client Sample ID: 031870-FRAC-OUT-101105
 Lab Sample ID: M51602-1
 Matrix: AQ - Surface Water
 Method: SW846 8270C SW846 3510C
 Project: One First Street, Cambridge, MA

Date Sampled: 10/11/05
 Date Received: 10/11/05
 Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	E24740.D	1	10/14/05	PN	10/12/05	OP9821	MSE1293
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	5.0	ug/l	
208-96-8	Acenaphthylene	ND	5.0	ug/l	
120-12-7	Anthracene	ND	5.0	ug/l	
56-55-3	Benzo(a)anthracene	ND	5.0	ug/l	
50-32-8	Benzo(a)pyrene	ND	5.0	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	5.0	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5.0	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5.0	ug/l	
218-01-9	Chrysene	ND	5.0	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	5.0	ug/l	
206-44-0	Fluoranthene	ND	5.0	ug/l	
86-73-7	Fluorene	ND	5.0	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.0	ug/l	
91-57-6	2-Methylnaphthalene	ND	5.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
85-01-8	Phenanthrene	ND	5.0	ug/l	
129-00-0	Pyrene	ND	5.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	79%		32-120%
321-60-8	2-Fluorobiphenyl	77%		32-120%
1718-51-0	Terphenyl-d14	70%		33-123%

ND = Not detected
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Page 1 of 1

2.1

2

Client Sample ID: 031870-FRAC-OUT-101105
Lab Sample ID: M51602-1
Matrix: AQ - Surface Water
Method: SW846-8015 SW846 3510C
Project: One First Street, Cambridge, MA

Date Sampled: 10/11/05
Date Received: 10/11/05
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	PO37454.D	1	10/14/05	DG	10/13/05	OP9824	GPO2398
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
	TPH-DRO (Semi-VOA)	0.389	0.20	mg/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits	
3386-33-2	1-Chlorooctadecane	73%		39-140%	

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Page 1 of 1

2.1

2

Client Sample ID:	031870-FRAC-OUT-101105	Date Sampled:	10/11/05
Lab Sample ID:	M51602-1	Date Received:	10/11/05
Matrix:	AQ - Surface Water	Percent Solids:	n/a
Project:	One First Street, Cambridge, MA		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	19.9	5.0	ug/l	1	10/12/05	10/13/05 AC	SW846 6010B ¹	SW846 3010A ²

(1) Instrument QC Batch: MA6347

(2) Prep QC Batch: MP7753

N/A

RL = Reporting Limit

Report of Analysis

Page 1 of 1

2.1

2

Client Sample ID: 031870-FRAC-OUT-101105

Lab Sample ID: M51602-1

Date Sampled: 10/11/05

Matrix: AQ - Surface Water

Date Received: 10/11/05

Percent Solids: n/a

Project: One First Street, Cambridge, MA

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Solids, Total Suspended	2400	20	mg/l	5	10/12/05	BF	EPA 160.2

N/A

RL = Reporting Limit

Report of Analysis

Page 1 of 1

22

2

Client Sample ID: 031870-FRAC-IN-101105
 Lab Sample ID: M51602-2
 Matrix: AQ - Surface Water
 Method: SW846 8260B
 Project: One First Street, Cambridge, MA

Date Sampled: 10/11/05
 Date Received: 10/11/05
 Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	P2437.D	1	10/20/05	AMY	n/a	n/a	MSP81
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	30.3	5.0	ug/l	B
91-20-3	Naphthalene	ND	5.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	76% ^b		82-127%
2037-26-5	Toluene-D8	100%		88-112%
460-00-4	4-Bromofluorobenzene	100%		80-118%

(a) The pH of the sample aliquot for VOA analysis was > 2 at time of analysis.

(b) Outside control limits due to possible matrix interference. Confirmed by reanalysis.

ND = Not detected
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Page 1 of 1

2.2

2

Client Sample ID:	031870-FRAC-IN-101105	Date Sampled:	10/11/05
Lab Sample ID:	M51602-2	Date Received:	10/11/05
Matrix:	AQ - Surface Water	Percent Solids:	n/a
Method:	SW846 8270C SW846 3510C		
Project:	One First Street, Cambridge, MA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	E24741.D	1	10/14/05	PN	10/12/05	OP9821	MSE1293
Run #2							

Run #	Initial Volume	Final Volume
Run #1	1000 ml	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	5.0	ug/l	
208-96-8	Acenaphthylene	ND	5.0	ug/l	
120-12-7	Anthracene	ND	5.0	ug/l	
56-55-3	Benzo(a)anthracene	ND	5.0	ug/l	
50-32-8	Benzo(a)pyrene	ND	5.0	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	5.0	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5.0	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5.0	ug/l	
218-01-9	Chrysene	ND	5.0	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	5.0	ug/l	
206-44-0	Fluoranthene	ND	5.0	ug/l	
86-73-7	Fluorene	ND	5.0	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.0	ug/l	
91-57-6	2-Methylnaphthalene	ND	5.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
85-01-8	Phenanthrene	ND	5.0	ug/l	
129-00-0	Pyrene	ND	5.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	70%		32-120%
321-60-8	2-Fluorobiphenyl	74%		32-120%
1718-51-0	Terphenyl-d14	62%		33-123%

ND = Not detected
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Page 1 of 1

2.2

2

Client Sample ID: 031870-FRAC-IN-101105
 Lab Sample ID: M51602-2
 Matrix: AQ - Surface Water
 Method: SW846-8015 SW846 3510C
 Project: One First Street, Cambridge, MA

Date Sampled: 10/11/05
 Date Received: 10/11/05
 Percent Solids: n/a

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	PO37455.D	1	10/14/05	DG	10/13/05	OP9824	GPO2398
Run #2							

Run #	Initial Volume	Final Volume
Run #1	930 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
	TPH-DRO (Semi-VOA)	0.581	0.22	mg/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits	
3386-33-2	1-Chlorooctadecane	79%		39-140%	

ND = Not detected
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Page 1 of 1

22

2

Client Sample ID: 031870-FRAC-IN-101105

Lab Sample ID: M51602-2

Date Sampled: 10/11/05

Matrix: AQ - Surface Water

Date Received: 10/11/05

Percent Solids: n/a

Project: One First Street, Cambridge, MA

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	133	5.0	ug/l	1	10/12/05	10/13/05 AC	SW846 6010B ¹	SW846 3010A ²

(1) Instrument QC Batch: MA6347

(2) Prep QC Batch: MP7753

RL = Reporting Limit

Report of Analysis

Page 1 of 1

2.2

2

Client Sample ID: 031870-FRAC-IN-101105

Lab Sample ID: M51602-2

Date Sampled: 10/11/05

Matrix: AQ - Surface Water

Date Received: 10/11/05

Percent Solids: n/a

Project: One First Street, Cambridge, MA

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Solids, Total Suspended	8660	20	mg/l	5	10/12/05	BF	EPA 160.2

RL = Reporting Limit



Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

GC/MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Surrogate Recovery Summaries

Method Blank Summary

Page 1 of 1

Job Number: M51602
Account: GEI GEI Consultants, Inc.
Project: One First Street, Cambridge, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSP81-MB	P2429.D	1	10/20/05	AMY	n/a	n/a	MSP81

The QC reported here applies to the following samples:

Method: SW846 8260B

M51602-1, M51602-2

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	6.2	5.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	

CAS No.	Surrogate Recoveries	Limits
1868-53-7	Dibromofluoromethane	109% 82-127%
2037-26-5	Toluene-D8	101% 88-112%
460-00-4	4-Bromofluorobenzene	100% 80-118%

Blank Spike Summary

Page 1 of 1

Job Number: M51602

Account: GEI GEI Consultants, Inc.

Project: One First Street, Cambridge, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSP81-BS	P2427.D	1	10/20/05	AMY	n/a	n/a	MSP81

The QC reported here applies to the following samples:

Method: SW846 8260B

M51602-1, M51602-2

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	50	56.0	112	31-150
91-20-3	Naphthalene	50	53.4	107	51-144

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	106%	82-127%
2037-26-5	Toluene-D8	103%	88-112%
460-00-4	4-Bromofluorobenzene	99%	80-118%

Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 1

Job Number: M51602
Account: GEI GEI Consultants, Inc.
Project: One First Street, Cambridge, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
M51628-1MS	P2445.D	5	10/20/05	AMY	n/a	n/a	MSP81
M51628-1MSD	P2446.D	5	10/20/05	AMY	n/a	n/a	MSP81
M51628-1	P2438.D	1	10/20/05	AMY	n/a	n/a	MSP81

The QC reported here applies to the following samples:

Method: SW846 8260B

M51602-1, M51602-2

CAS No.	Compound	M51628-1 ug/l	Spike Q ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	4.9	250	285	112	280	110	2	30-150/35
91-20-3	Naphthalene	ND	250	267	107	263	105	2	37-146/28

CAS No.	Surrogate Recoveries	MS	MSD	M51628-1	Limits
1868-53-7	Dibromofluoromethane	106%	102%	109%	82-127%
2037-26-5	Toluene-D8	103%	102%	101%	88-112%
460-00-4	4-Bromofluorobenzene	102%	100%	102%	80-118%

Volatile Surrogate Recovery Summary

Page 1 of 1

Job Number: M51602

Account: GEI GEI Consultants, Inc.

Project: One First Street, Cambridge, MA

Method: SW846 8260B

Matrix: AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3
M51602-1	P2436.D	107.0	101.0	102.0
M51602-2	P2437.D	76.0* ^a	100.0	100.0
M51628-1MS	P2445.D	106.0	103.0	102.0
M51628-1MSD	P2446.D	102.0	102.0	100.0
MSP81-BS	P2427.D	106.0	103.0	99.0
MSP81-MB	P2429.D	109.0	101.0	100.0

Surrogate Compounds	Recovery Limits
------------------------	--------------------

S1 = Dibromofluoromethane	82-127%
---------------------------	---------

S2 = Toluene-D8	88-112%
-----------------	---------

S3 = 4-Bromofluorobenzene	80-118%
---------------------------	---------

(a) Outside control limits due to possible matrix interference. Confirmed by reanalysis.

GC/MS Semi-volatiles

5

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Surrogate Recovery Summaries

Method Blank Summary

Page 1 of 1

Job Number: M51602
Account: GEI GEI Consultants, Inc.
Project: One First Street, Cambridge, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP9821-MB	E24737.D	1	10/14/05	PN	10/12/05	OP9821	MSE1293

The QC reported here applies to the following samples:

Method: SW846 8270C

M51602-1, M51602-2

CAS No.	Compound	Result	RL	Units	Q
83-32-9	Acenaphthene	ND	5.0	ug/l	
208-96-8	Acenaphthylene	ND	5.0	ug/l	
120-12-7	Anthracene	ND	5.0	ug/l	
56-55-3	Benzo(a)anthracene	ND	5.0	ug/l	
50-32-8	Benzo(a)pyrene	ND	5.0	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	5.0	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5.0	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5.0	ug/l	
218-01-9	Chrysene	ND	5.0	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	5.0	ug/l	
206-44-0	Fluoranthene	ND	5.0	ug/l	
86-73-7	Fluorene	ND	5.0	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.0	ug/l	
91-57-6	2-Methylnaphthalene	ND	5.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
85-01-8	Phenanthrene	ND	5.0	ug/l	
129-00-0	Pyrene	ND	5.0	ug/l	

CAS No.	Surrogate Recoveries		Limits
367-12-4	2-Fluorophenol	40%	10-120%
4165-62-2	Phenol-d5	27%	10-120%
118-79-6	2,4,6-Tribromophenol	61%	31-123%
4165-60-0	Nitrobenzene-d5	62%	32-120%
321-60-8	2-Fluorobiphenyl	56%	32-120%
1718-51-0	Terphenyl-d14	62%	33-123%

Blank Spike Summary

Page 1 of 1

Job Number: M51602

Account: GEI GEI Consultants, Inc.

Project: One First Street, Cambridge, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP9821-BS	E24738.D	1	10/14/05	PN	10/12/05	OP9821	MSE1293

The QC reported here applies to the following samples:

Method: SW846 8270C

M51602-1, M51602-2

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
83-32-9	Acenaphthene	50	31.3	63	55-120
208-96-8	Acenaphthylene	50	30.7	61	53-120
120-12-7	Anthracene	50	32.5	65	59-120
56-55-3	Benzo(a)anthracene	50	33.4	67	59-120
50-32-8	Benzo(a)pyrene	50	30.5	61	58-120
205-99-2	Benzo(b)fluoranthene	50	29.5	59	54-120
191-24-2	Benzo(g,h,i)perylene	50	31.9	64	58-120
207-08-9	Benzo(k)fluoranthene	50	34.5	69	47-124
218-01-9	Chrysene	50	33.6	67	62-120
53-70-3	Dibenzo(a,h)anthracene	50	32.6	65	55-124
206-44-0	Fluoranthene	50	30.5	61	59-120
86-73-7	Fluorene	50	32.7	65	58-120
193-39-5	Indeno(1,2,3-cd)pyrene	50	30.2	60	53-120
91-57-6	2-Methylnaphthalene	50	27.4	55	39-120
91-20-3	Naphthalene	50	28.9	58	44-120
85-01-8	Phenanthrene	50	31.8	64	56-120
129-00-0	Pyrene	50	32.8	66	58-120

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	44%	10-120%
4165-62-2	Phenol-d5	29%	10-120%
118-79-6	2,4,6-Tribromophenol	63%	31-123%
4165-60-0	Nitrobenzene-d5	58%	32-120%
321-60-8	2-Fluorobiphenyl	62%	32-120%
1718-51-0	Terphenyl-d14	65%	33-123%

Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 1

Job Number: M51602
Account: GEI GEI Consultants, Inc.
Project: One First Street, Cambridge, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP9821-MS	E24742.D	1	10/14/05	PN	10/12/05	OP9821	MSE1293
OP9821-MSD	E24743.D	1	10/14/05	PN	10/12/05	OP9821	MSE1293
M51643-1	E24744.D	1	10/14/05	PN	10/12/05	OP9821	MSE1293

The QC reported here applies to the following samples:

Method: SW846 8270C

M51602-1, M51602-2

CAS No.	Compound	M51643-1 ug/l	Spike Q	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
83-32-9	Acenaphthene	ND	50	33.6	67	30.6	61	9	51-120/25
208-96-8	Acenaphthylene	ND	50	31.4	63	29.2	58	7	49-120/25
120-12-7	Anthracene	ND	50	34.1	68	32.0	64	6	55-120/26
56-55-3	Benzo(a)anthracene	ND	50	34.3	69	33.4	67	3	55-120/24
50-32-8	Benzo(a)pyrene	ND	50	32.8	66	31.5	63	4	55-120/25
205-99-2	Benzo(b)fluoranthene	ND	50	33.3	67	30.4	61	9	50-120/28
191-24-2	Benzo(g,h,i)perylene	ND	50	33.7	67	33.1	66	2	52-120/25
207-08-9	Benzo(k)fluoranthene	ND	50	33.3	67	36.8	74	10	41-129/40
218-01-9	Chrysene	ND	50	34.5	69	33.0	66	4	57-120/23
53-70-3	Dibenzo(a,h)anthracene	ND	50	34.9	70	33.3	67	5	47-131/24
206-44-0	Fluoranthene	ND	50	33.3	67	31.3	63	6	56-120/25
86-73-7	Fluorene	ND	50	34.1	68	31.2	62	9	54-120/26
193-39-5	Indeno(1,2,3-cd)pyrene	ND	50	33.4	67	30.8	62	8	52-120/29
91-57-6	2-Methylnaphthalene	ND	50	29.1	58	27.3	55	6	35-120/34
91-20-3	Naphthalene	ND	50	28.6	57	28.3	57	1	41-120/32
85-01-8	Phenanthrene	ND	50	34.3	69	32.6	65	5	51-120/24
129-00-0	Pyrene	ND	50	33.7	67	32.9	66	2	53-120/24

CAS No.	Surrogate Recoveries	MS	MSD	M51643-1	Limits
367-12-4	2-Fluorophenol	47%	47%	38%	10-120%
4165-62-2	Phenol-d5	31%	32%	19%	10-120%
118-79-6	2,4,6-Tribromophenol	64%	66%	54%	31-123%
4165-60-0	Nitrobenzene-d5	65%	65%	56%	32-120%
321-60-8	2-Fluorobiphenyl	67%	61%	55%	32-120%
1718-51-0	Terphenyl-d14	66%	67%	57%	33-123%

Semivolatile Surrogate Recovery Summary

Page 1 of 1

Job Number: M51602

Account: GEI GEI Consultants, Inc.

Project: One First Street, Cambridge, MA

Method: SW846 8270C

Matrix: AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3
M51602-1	E24740.D	79.0	77.0	70.0
M51602-2	E24741.D	70.0	74.0	62.0
OP9821-BS	E24738.D	58.0	62.0	65.0
OP9821-MB	E24737.D	62.0	56.0	62.0
OP9821-MS	E24742.D	65.0	67.0	66.0
OP9821-MSD	E24743.D	65.0	61.0	67.0

Surrogate Compounds	Recovery Limits
------------------------	--------------------

S1 = Nitrobenzene-d5	32-120%
S2 = 2-Fluorobiphenyl	32-120%
S3 = Terphenyl-d14	33-123%

5.4

5

GC Semi-volatiles

9

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Surrogate Recovery Summaries

Method Blank Summary

Page 1 of 1

Job Number: M51602
Account: GEI GEI Consultants, Inc.
Project: One First Street, Cambridge, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP9824-MB	PO37447A.D1		10/14/05	DG	10/13/05	OP9824	GPO2398

The QC reported here applies to the following samples:

Method: SW846-8015

M51602-1, M51602-2

CAS No.	Compound	Result	RL	Units	Q
	TPH-DRO (Semi-VOA)	ND	0.20	mg/l	

CAS No.	Surrogate Recoveries	Limits
3386-33-2	1-Chlorooctadecane	75% 39-140%

6.1

6

Blank Spike Summary

Page 1 of 1

Job Number: M51602
Account: GEI GEI Consultants, Inc.
Project: One First Street, Cambridge, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP9824-BS	PO37448A.D1		10/14/05	DG	10/13/05	OP9824	GPO2398

The QC reported here applies to the following samples:

Method: SW846-8015

M51602-1, M51602-2

CAS No.	Compound	Spike mg/l	BSP mg/l	BSP %	Limits
	TPH-DRO (Semi-VOA)	1.6	1.41	88	52-115

CAS No.	Surrogate Recoveries	BSP	Limits
3386-33-2	1-Chlorooctadecane	68%	39-140%

Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 1

Job Number: M51602
Account: GEI GEI Consultants, Inc.
Project: One First Street, Cambridge, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP9824-MS	PO37449A.D1		10/14/05	DG	10/13/05	OP9824	GPO2398
OP9824-MSD	PO37450A.D1		10/14/05	DG	10/13/05	OP9824	GPO2398
M51665-1	PO37451A.D1		10/14/05	DG	10/13/05	OP9824	GPO2398

The QC reported here applies to the following samples:

Method: SW846-8015

M51602-1, M51602-2

CAS No.	Compound	M51665-1 mg/l	Spike Q mg/l	MS mg/l	MS %	MSD mg/l	MSD %	RPD	Limits Rec/RPD
	TPH-DRO (Semi-VOA)	ND	1.6	1.43	89	1.41	88	1	52-117/23

CAS No.	Surrogate Recoveries	MS	MSD	M51665-1	Limits
3386-33-2	1-Chlorooctadecane	92%	86%	90%	39-140%

Semivolatile Surrogate Recovery Summary

Page 1 of 1

Job Number: M51602

Account: GEI GEI Consultants, Inc.

Project: One First Street, Cambridge, MA

Method: SW846-8015

Matrix: AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 ^a
M51602-1	PO37454.D	73.0
M51602-2	PO37455.D	79.0
OP9824-BS	PO37448A.D	68.0
OP9824-MB	PO37447A.D	75.0
OP9824-MS	PO37449A.D	92.0
OP9824-MSD	PO37450A.D	86.0

Surrogate Compounds	Recovery Limits
------------------------	--------------------

S1 = 1-Chlorooctadecane	39-140%
-------------------------	---------

(a) Recovery from GC signal #1

6.4

6

Metals Analysis

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries

7

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: M51602
Account: GEI - GEI Consultants, Inc.
Project: One First Street, Cambridge, MA

QC Batch ID: MP7753
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date: 10/12/05

Metal	RL	IDL	MB raw	final
Aluminum	200	14		
Antimony	6.0	1.6		
Arsenic	5.0	2.3	0.51	<5.0
Barium	200	1.7		
Beryllium	4.0	.18		
Boron	100	1.2		
Cadmium	4.0	.31		
Calcium	5000	4.7		
Chromium	10	.53		
Cobalt	50	.47		
Copper	25	2.8		
Iron	100	14		
Lead	5.0	1.9	anr	
Magnesium	5000	5.3		
Manganese	15	.17		
Molybdenum	100	.92		
Nickel	40	.65		
Potassium	5000	31		
Selenium	10	2.7		
Silver	5.0	.53		
Sodium	5000	110		
Strontium	10	.22		
Thallium	10	2.9		
Tin	100	9.4		
Titanium	50	1.3		
Vanadium	50	2.4		
Zinc	20	1.2		

Associated samples MP7753: M51602-1, M51602-2

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

7.1.1

7

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: M51602
 Account: GEI - GEI Consultants, Inc.
 Project: One First Street, Cambridge, MA

QC Batch ID: MP7753
 Matrix Type: AQUEOUS

Methods: SW846 6010B
 Units: ug/l

Prep Date: 10/12/05 10/12/05

Metal	M51508-6 Original MS	SpikeLot MP1RWS2	% Rec	QC Limits	M51508-6 Original DUP	RPD	QC Limits
Aluminum							
Antimony							
Arsenic	0.0	520	500	104.0	75-125	0.0	2.3
Barium							200.0(a)
Beryllium							0-20
Boron							
Cadmium							
Calcium							
Chromium							
Cobalt							
Copper							
Iron							
Lead	anr						
Magnesium							
Manganese							
Molybdenum							
Nickel							
Potassium							
Selenium							
Silver							
Sodium							
Strontium							
Thallium							
Tin							
Titanium							
Vanadium							
Zinc							

Associated samples MP7753: M51602-1, M51602-2

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (N) Matrix Spike Rec. outside of QC limits
 (anr) Analyte not requested
 (a) RPD acceptable due to low duplicate and sample concentrations.

7.1.2

7

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: M51602
 Account: GEI - GEI Consultants, Inc.
 Project: One First Street, Cambridge, MA

QC Batch ID: MP7753
 Matrix Type: AQUEOUS

Methods: SW846 6010B
 Units: ug/l

Prep Date: 10/12/05

Metal	BSP Result	SpikeLot MPIRWS2	% Rec	QC Limits
Aluminum				
Antimony				
Arsenic	510	500	102.0	80-120
Barium				
Beryllium				
Boron				
Cadmium				
Calcium				
Chromium				
Cobalt				
Copper				
Iron				
Lead	anr			
Magnesium				
Manganese				
Molybdenum				
Nickel				
Potassium				
Selenium				
Silver				
Sodium				
Strontium				
Thallium				
Tin				
Titanium				
Vanadium				
Zinc				

Associated samples MP7753: M51602-1, M51602-2

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (anr) Analyte not requested

7.1.3
7

SERIAL DILUTION RESULTS SUMMARY

Login Number: M51602
 Account: GEI - GEI Consultants, Inc.
 Project: One First Street, Cambridge, MA

QC Batch ID: MP7753
 Matrix Type: AQUEOUS

Methods: SW846 6010B
 Units: ug/l

Prep Date: 10/12/05

Metal	M51508-6 Original	SDL 1:1	RPD	QC Limits
-------	----------------------	---------	-----	--------------

Aluminum

Antimony

Arsenic 0.00 0.00 NC 0-10

Barium

Beryllium

Boron

Cadmium

Calcium

Chromium

Cobalt

Copper

Iron

Lead anr

Magnesium

Manganese

Molybdenum

Nickel

Potassium

Selenium

Silver

Sodium

Strontium

Thallium

Tin

Titanium

Vanadium

Zinc

Associated samples MP7753: M51602-1, M51602-2

Results < IDL are shown as zero for calculation purposes

(*) Outside of QC limits

(anr) Analyte not requested

7.1.4

7

General Chemistry

QC Data Summaries



Includes the following where applicable:

- Method Blank and Blank Spike Summaries
- Duplicate Summaries
- Matrix Spike Summaries

METHOD BLANK AND SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: M51602
Account: GEI - GEI Consultants, Inc.
Project: One First Street, Cambridge, MA

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Solids, Total Suspended	GN18077	4.0	<4.0	mg/l				

Associated Samples:
Batch GN18077: M51602-1, M51602-2

8.1
8

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: M51602
Account: GEI - GEI Consultants, Inc.
Project: One First Street, Cambridge, MA

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Solids, Total Suspended	GN18077	M51551-5	mg/l	<4.0	<4.0	0.0	0-20%

Associated Samples:

Batch GN18077: M51602-1, M51602-2

8.2

8



10/24/05

Technical Report for

GEI Consultants, Inc.

One First Street, Cambridge, MA

031870

Accutest Job Number: M51550

Sampling Date: 10/10/05

Report to:

GEI Consultants, Inc.

RPearry@geiconsultants.com

ATTN: Richard Peary

Total number of pages in report: 22



Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

Reza Fand
Reza Fand
Lab Director

Certifications: MA (M-MA136) CT (PH-0109) NH (250204) RI (00071) ME (MA136) FL (E87579)
NY (23346) NJ (MA926) NAVY USACE

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Sample Summary

GEI Consultants, Inc.

Job No: M51550

One First Street, Cambridge, MA

Project No: 031870

Sample Number	Collected Date	Time By	Received	Matrix Code Type	Client Sample ID
M51550-1	10/10/05	08:05 RLP	10/10/05	AQ Ground Water	031870-GEI101
M51550-1A	10/10/05	08:05 RLP	10/10/05	AQ Ground Water	031870-GEI101

Report of Analysis

Page 1 of 3

Client Sample ID:	031870-GEI101	Date Sampled:	10/10/05
Lab Sample ID:	M51550-1	Date Received:	10/10/05
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	One First Street, Cambridge, MA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	N4847.D	1	10/20/05	ZW	n/a	n/a	MSN173
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

VOA 8260 List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	5.0	ug/l	
71-43-2	Benzene	ND	0.50	ug/l	
108-86-1	Bromobenzene	ND	5.0	ug/l	
74-97-5	Bromochloromethane	ND	5.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
75-15-0	Carbon disulfide	ND	5.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	2.0	ug/l	
75-00-3	Chloroethane	ND	2.0	ug/l	
67-66-3	Chloroform	1.6	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	ug/l	
108-20-3	Di-Isopropyl ether	ND	2.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Page 2 of 3

Client Sample ID:	031870-GEI101	Date Sampled:	10/10/05
Lab Sample ID:	M51550-1	Date Received:	10/10/05
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	One First Street, Cambridge, MA		

VOA 8260 List

CAS No.	Compound	Result	RL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
123-91-1	1,4-Dioxane	ND	25	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l	
591-78-6	2-Hexanone	ND	5.0	ug/l	
74-88-4	Iodomethane	ND	5.0	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l	
74-95-3	Methylene bromide	ND	5.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	ug/l	
100-42-5	Styrene	ND	5.0	ug/l	
994-05-8	tert-Amyl Methyl Ether	ND	2.0	ug/l	
75-65-0	Tert Butyl Alcohol	ND	100	ug/l	
637-92-3	tert-Butyl Ethyl Ether	ND	2.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
1330-20-7	Xylene (total)	ND	1.0	ug/l	

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Page 3 of 3

2.1

2

Client Sample ID:	031870-GEI101	Date Sampled:	10/10/05
Lab Sample ID:	M51550-1	Date Received:	10/10/05
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	One First Street, Cambridge, MA		

VOA 8260 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	108%		82-127%
2037-26-5	Toluene-D8	100%		88-112%
460-00-4	4-Bromofluorobenzene	114%		80-118%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Page 1 of 2

Client Sample ID: 031870-GEI101

Lab Sample ID: M51550-1

Date Sampled: 10/10/05

Matrix: AQ - Ground Water

Date Received: 10/10/05

Method: SW846 8270C SW846 3510C

Percent Solids: n/a

Project: One First Street, Cambridge, MA

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	E24880.D	1	10/19/05	PN	10/12/05	OP9821	MSE1296
Run #2							

	Initial Volume	Final Volume
Run #1	960 ml	1.0 ml
Run #2		

ABN PPL List

CAS No.	Compound	Result	RL	Units	Q
95-57-8	2-Chlorophenol	ND	5.2	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	10	ug/l	
120-83-2	2,4-Dichlorophenol	ND	10	ug/l	
105-67-9	2,4-Dimethylphenol	ND	10	ug/l	
51-28-5	2,4-Dinitrophenol	ND	21	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	10	ug/l	
88-75-5	2-Nitrophenol	ND	10	ug/l	
100-02-7	4-Nitrophenol	ND	21	ug/l	
87-86-5	Pentachlorophenol	ND	10	ug/l	
108-95-2	Phenol	ND	5.2	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	10	ug/l	
83-32-9	Acenaphthene	ND	5.2	ug/l	
208-96-8	Acenaphthylene	ND	5.2	ug/l	
120-12-7	Anthracene	ND	5.2	ug/l	
92-87-5	Benzidine	ND	21	ug/l	
56-55-3	Benzo(a)anthracene	ND	5.2	ug/l	
50-32-8	Benzo(a)pyrene	ND	5.2	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	5.2	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5.2	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5.2	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.2	ug/l	
85-68-7	Butyl benzyl phthalate	ND	10	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.2	ug/l	
106-47-8	4-Chloroaniline	ND	10	ug/l	
218-01-9	Chrysene	ND	5.2	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.2	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.2	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.2	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.2	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	5.2	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.2	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	5.2	ug/l	

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Page 2 of 2

Client Sample ID:	031870-GEI101	Date Sampled:	10/10/05
Lab Sample ID:	M51550-1	Date Received:	10/10/05
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8270C SW846 3510C		
Project:	One First Street, Cambridge, MA		

ABN PPL List

CAS No.	Compound	Result	RL	Units	Q
106-46-7	1,4-Dichlorobenzene	ND	5.2	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	10	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	10	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.2	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	5.2	ug/l	
84-74-2	Di-n-butyl phthalate	ND	10	ug/l	
117-84-0	Di-n-octyl phthalate	ND	10	ug/l	
84-66-2	Diethyl phthalate	ND	10	ug/l	
131-11-3	Dimethyl phthalate	ND	10	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	10	ug/l	
206-44-0	Fluoranthene	ND	5.2	ug/l	
86-73-7	Fluorene	ND	5.2	ug/l	
118-74-1	Hexachlorobenzene	ND	5.2	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.2	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	10	ug/l	
67-72-1	Hexachloroethane	ND	5.2	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.2	ug/l	
78-59-1	Isophorone	ND	5.2	ug/l	
91-20-3	Naphthalene	ND	5.2	ug/l	
98-95-3	Nitrobenzene	ND	5.2	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.2	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.2	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.2	ug/l	
85-01-8	Phenanthrene	ND	5.2	ug/l	
129-00-0	Pyrene	ND	5.2	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.2	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	6% ^a		10-120%
4165-62-2	Phenol-d5	7% ^a		10-120%
118-79-6	2,4,6-Tribromophenol	9% ^a		31-123%
4165-60-0	Nitrobenzene-d5	50%		32-120%
321-60-8	2-Fluorobiphenyl	43%		32-120%
1718-51-0	Terphenyl-d14	46%		33-123%

(a) Outside control limits due to matrix interference. Confirmed by reanalysis.

ND = Not detected
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 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

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Client Sample ID:	031870-GEI101	Date Sampled:	10/10/05
Lab Sample ID:	M51550-1	Date Received:	10/10/05
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	EPA 504 EPA 504		
Project:	One First Street, Cambridge, MA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	YZ29111.D	1	10/15/05	CZ	10/14/05	OP9830	GYZ1210
Run #2							

Run #	Initial Volume	Final Volume
Run #1	35.7 ml	2.0 ml
Run #2		

CAS No.	Compound	Result	RL	Units	Q
106-93-4	1,2-Dibromoethane	ND	0.015	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	114%		26-158%
460-00-4	Bromofluorobenzene (S)	140%		26-158%

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J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

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Client Sample ID:	031870-GEI101	Date Sampled:	10/10/05
Lab Sample ID:	M51550-1	Date Received:	10/10/05
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	EPA 608 EPA 608		
Project:	One First Street, Cambridge, MA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	YZ29091.D	1	10/15/05	CZ	10/13/05	OP9826	GYZ1209
Run #2							

Run #	Initial Volume	Final Volume
Run #1	900 ml	5.0 ml
Run #2		

PCB List

CAS No.	Compound	Result	RL	Units	Q
12674-11-2	Aroclor 1016	ND	0.56	ug/l	
11104-28-2	Aroclor 1221	ND	0.56	ug/l	
11141-16-5	Aroclor 1232	ND	0.56	ug/l	
53469-21-9	Aroclor 1242	ND	0.56	ug/l	
12672-29-6	Aroclor 1248	ND	0.56	ug/l	
11097-69-1	Aroclor 1254	ND	0.56	ug/l	
11096-82-5	Aroclor 1260	ND	0.56	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	87%		44-132%
877-09-8	Tetrachloro-m-xylene	87%		44-132%
2051-24-3	Decachlorobiphenyl	95%		12-151%
2051-24-3	Decachlorobiphenyl	91%		12-151%

ND = Not detected
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

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Client Sample ID:	031870-GEI101	Date Sampled:	10/10/05
Lab Sample ID:	M51550-1	Date Received:	10/10/05
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Project:	One First Street, Cambridge, MA		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Antimony	< 6.0	6.0	ug/l	1	10/12/05	10/14/05 AC	EPA 200.7 ²	EPA 200.7 ⁴
Arsenic	< 5.0	5.0	ug/l	1	10/12/05	10/14/05 AC	EPA 200.7 ²	EPA 200.7 ⁴
Cadmium	< 4.0	4.0	ug/l	1	10/12/05	10/14/05 AC	EPA 200.7 ²	EPA 200.7 ⁴
Chromium	< 10	10	ug/l	1	10/12/05	10/14/05 AC	EPA 200.7 ²	EPA 200.7 ⁴
Copper	< 25	25	ug/l	1	10/12/05	10/14/05 AC	EPA 200.7 ²	EPA 200.7 ⁴
Iron	< 100	100	ug/l	1	10/12/05	10/14/05 AC	EPA 200.7 ²	EPA 200.7 ⁴
Lead	< 5.0	5.0	ug/l	1	10/12/05	10/14/05 AC	EPA 200.7 ²	EPA 200.7 ⁴
Mercury	< 0.20	0.20	ug/l	1	10/11/05	10/12/05 LMN	EPA 245.1 ¹	EPA 245.1 ³
Nickel	< 40	40	ug/l	1	10/12/05	10/14/05 AC	EPA 200.7 ²	EPA 200.7 ⁴
Selenium	< 10	10	ug/l	1	10/12/05	10/14/05 AC	EPA 200.7 ²	EPA 200.7 ⁴
Silver	< 5.0	5.0	ug/l	1	10/12/05	10/14/05 AC	EPA 200.7 ²	EPA 200.7 ⁴
Zinc	< 20	20	ug/l	1	10/12/05	10/14/05 AC	EPA 200.7 ²	EPA 200.7 ⁴

- (1) Instrument QC Batch: MA6341
 (2) Instrument QC Batch: MA6356
 (3) Prep QC Batch: MP7746
 (4) Prep QC Batch: MP7755

 RL = Reporting Limit

Report of Analysis

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Client Sample ID:	031870-GEI101	Date Sampled:	10/10/05
Lab Sample ID:	M51550-1	Date Received:	10/10/05
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Project:	One First Street, Cambridge, MA		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent	< 0.010	0.010	mg/l	1	10/10/05 17:40	MA	SW846 7196A
Cyanide	< 0.010	0.010	mg/l	1	10/13/05 16:41	MA	EPA 335.3
Oil And Grease, Gravimetric	< 4.1	4.1	mg/l	1	10/12/05	BF	EPA 1664
Solids, Total Suspended	< 4.0	4.0	mg/l	1	10/12/05	BF	EPA 160.2
Total Residual Chlorine	< 0.050	0.050	mg/l	1	10/10/05 16:58	CF	EPA 330.4

RL = Reporting Limit

Report of Analysis

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Client Sample ID: 031870-GEI101

Lab Sample ID: M51550-1A

Date Sampled: 10/10/05

Matrix: AQ - Ground Water

Date Received: 10/10/05

Method: SW846 8270C BY SIM SW846 3510C

Percent Solids: n/a

Project: One First Street, Cambridge, MA

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F16456.D	1	10/19/05	PN	10/12/05	OP9822	MSF893
Run #2							

	Initial Volume	Final Volume
Run #1	960 ml	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound	Result	RL	Units	Q
87-86-5	Pentachlorophenol	ND	1.0	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	1.0	ug/l	
83-32-9	Acenaphthene	ND	0.10	ug/l	
208-96-8	Acenaphthylene	ND	0.10	ug/l	
120-12-7	Anthracene	ND	0.10	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.052	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.10	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.052	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.10	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.10	ug/l	
218-01-9	Chrysene	ND	0.10	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.10	ug/l	
206-44-0	Fluoranthene	ND	0.10	ug/l	
86-73-7	Fluorene	ND	0.10	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.10	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.21	ug/l	
91-20-3	Naphthalene	ND	0.10	ug/l	
85-01-8	Phenanthrene	ND	0.10	ug/l	
129-00-0	Pyrene	ND	0.10	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	8% ^a		10-120%
4165-62-2	Phenol-d5	11%		10-120%
118-79-6	2,4,6-Tribromophenol	13% ^a		23-135%
4165-60-0	Nitrobenzene-d5	51%		30-120%
321-60-8	2-Fluorobiphenyl	60%		25-120%
1718-51-0	Terphenyl-d14	61%		24-132%

(a) Outside control limits due to matrix interference. Confirmed by reanalysis.

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound



Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

Laboratory Job # MS1550

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14 MCP Metals = Antimony, Arsenic, Barium, Beryllium, Cadmium, Chromium (total), Lead, Mercury, Nickel, Selenium, Silver, Thallium, Vanadium, Zinc.

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Appendix VI: Minimum Levels and Test Methods

PARAMETER - CAS No. -	Minimum Levels and Test Methods ^{1,2,3}				
	GC ⁴	GCMS ⁵	LC ⁶	FAA ⁷	Other
1. Total Suspended Solids (TSS)					5 mg/l Method 160.2
2. Total Residual Chlorine (TRC)					20 ug/l Method 330.5
3. Total Petroleum Hydrocarbons (TPH)					5 mg/l Method 1664
4. Cyanide (total) - 57125 -					10 ug/l Method 335.4
5. Benzene (B) - 71432 -	0.5 ug/l Method 602	2 ug/l Method 624			Method 8260C ²
6. Toluene (T) - 108883 -	0.5 ug/l Method 602	2 ug/l Method 624			Method 8260C ²
7. Ethylbenzene (E) - 100414 -	0.5 ug/l Method 602	2 ug/l Method 624			Method 8260C ²
8. (m,p,o) Xylenes (X) - 108383; 106423; 95476 -	0.5 ug/l Method 602	10 ug/l Method 1624			Method 8260C ²
9. Total BTEX	0.5 ug/l Method 602	2 ug/l Method 624			Method 8260C ²
10. Ethylene Dibromide (EDB) (1,2- Dibromoethane) - 106934 -	1.0 ug/l Method 618 0.01 ug/l Method 504.1	0.1 ug/l Methods 524.2			Method 8260C ²

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PARAMETER - CAS No. -	Minimum Levels and Test Methods (40 CFR 136)				
	GC	GCMS	LC	FAA	Other
11. Methyl-tert-Butyl Ether (MtBE)	0.5 ug/l Method 602 ^a	5.0 ug/l Method 524.2			Method 8260C ²
12. tert-Butyl Alcohol (TBA) (Tertiary-Butanol) - 75650 -	0.5 ug/l Method 602 ^a	100 ug/l Method 1666			Method 8260C ²
13. tert-Amyl Methyl Ether (TAME) -994058-	0.5 ug/l Method 602 ^a				Method 8260C ²
14. Naphthalene - 91203 -	10 ug/l Method 610 GC/FID	2 ug/l Method 625 5.0 ug/l Method 524.2	0.2 ug/l Method 610 HPLC		Method 8270D ³
15. Carbon Tetrachloride - 56235 -	0.5 ug/l Method 601	2 ug/l Methods 624, 1624			Method 8260C ²
16. 1,4 Dichlorobenzene (p-DCB) - 106467 -	0.5 ug/l Methods 601, 602	2 ug/l Methods 624, 625			Method 8260C ²
17. 1,2 Dichlorobenzene (o-DCB) - 95501 -	0.5 ug/l Methods 601, 602	2 ug/l Methods 624, 625			Method 8260C ²
18. 1,3 Dichlorobenzene (m-DCB) - 541731 -	0.5 ug/l Methods 601, 602	2 ug/l Methods 624, 625			Method 8260C ²
19. 1,1 Dichloroethane (DCA) - 75343 -	0.5 ug/l Method 601	1 ug/l Method 624			Method 8260C ²
20. 1,2 Dichloroethane (DCA)- 107062 -	0.5 ug/l Method 601	2 ug/l Method 624			Method 8260C ²

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PARAMETER - CAS No. -	Minimum Levels and Test Methods (40 CFR 136)				
	GC	GCMS	LC	FAA	Other
21. 1,1 Dichloroethylene (DCE) - 75354 -	0.5 ug/l Method 601	2 ug/l Method 624			Method 8260C ²
22. cis-1,2 Dichloro-ethylene (DCE) - 156592 -	0.5 ug/l Method 601	2 ug/l Method 624			Method 8260C ²
23. Dichloromethane (Methylene Chloride)- 75092 -	0.5 ug/l Method 601	2 ug/l Method 624			Method 8260C ²
24. Tetrachloroethylene (PCE) - 127184 -	0.5 ug/l Method 601	2 ug/l Method 624			Method 8260C ²
25. 1,1,1 Trichloro-ethane (TCA) - 71556 -	0.5 ug/l Method 601	2 ug/l Method 624			Method 8260C ²
26. 1,1,2 Trichloro-ethane (TCA) - 79005 -	0.5 ug/l Method 601	2 ug/l Method 624			Method 8260C ²
27. Trichloroethylene (TCE) - 79016 -	0.5 ug/l Method 601	2 ug/l Method 624			Method 8260C ²
28. Vinyl Chloride - 75014 -	0.5 ug/l Method 601	2 ug/l Method 624			Method 8260C ²
29. Acetone - 67641 -	1.0 ug/l Method 524.2	50 ug/l Method 1624			Method 8260C ²
30. 1,4 Dioxane - 123911 -		50 ug/l Method 1624			Method 8260C ²
31. Total Phenols - 108952	1.0 ug/l Method 624 Method 8260 ²	1 ug/l Methods 625, 1625			Method 8260C ² Method 8270D ³
32. Pentachlorophenol (PCP) - 87865 -	1.0 ug/l Method 604 GC/FID	5 ug/l Methods 625, 1625			Method 8270D ³

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PARAMETER - CAS No. -	Minimum Levels and Test Methods (40 CFR 136)				
	GC	GCMS	LC	FAA	Other
33. Total Phthalates ² (Phthalate esthers)		5 ug/l Method 625			Method 8270D ³
34. Bis (2-Ethylhexyl) Phthalate [Di- (ethylhexyl) Phthalate] - 117817 -	10 ug/l Method 606	5 ug/l Method 625			Method 8270D ³
35. Total Group I Polynuclear Aromatic Hydrocarbons (PAH)					Method 8270D ³
a. Benzo(a) Anthracene -56553-	10 ug/l Method 610 GC	5 ug/l Method 625	0.05 ug/l Method 610 HPLC		Method 8270D ³
b. Benzo(a) Pyrene -50328 -		10 ug/l Method 625	2 ug/l Method 610 HPLC		Method 8270D ³
c. Benzo(b)Fluoranthene - 205992 -		10 ug/l Method 625	0.1 ug/l Method 610 HPLC		Method 8270D ³
d. Benzo(k)Fluoranthene - 207089 -		10 ug/l Method 625	2 ug/l Method 610 HPLC		Method 8270D ³
e. Chrysene - 218019 -		10 ug/l Method 625	5 ug/l Method 610 HPLC		Method 8270D ³
f. Dibenzo(a,h) anthracene		10 ug/l Method 625	0.1 ug/l Method 610 HPLC		Method 8270D ³
g. Indeno(1,2,3-cd) Pyrene - 193395 -		10 ug/l Method 625	0.15 ug/l Method 610		Method 8270D ³
36. Total Group II Polynuclear Aromatic Hydrocarbons (PAH)					Method 8270D ³
h. Acenaphthene - 83329 -	1 ug/l Method 610 GC/FID	1 ug/l Method 625	0.5 ug/l Method 610 HPLC		Method 8270D ³
i. Acenaphthylene - 208968 -		10 ug/l Method 625	0.2 ug/l Method 610 HPLC		Method 8270D ³

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PARAMETER - CAS No. -	Minimum Levels and Test Methods (40 CFR 136)				
	GC	GCMS	LC	FAA	Other
j. Anthracene - 120127 -		10 ug/l Method 625	2 ug/l Method 610 HPLC		Method 8270D ³
k. Benzo(ghi) Perylene - 191242 -		5 ug/l Method 625	0.1 ug/l Method 610 HPLC		Method 8270D ³
l. Fluoranthene - 206440 -	10 ug/l Method 610 GC/FID	1 ug/l Method 625	0.5 ug/l Method 610 HPLC		Method 8270D ³
m. Fluorene - 86737 -		10 ug/l Method 625	0.1 ug/l Method 610 HPLC		Method 8270D ³
n. Naphthalene - 91203 -	10 ug/l Method 610 GC/FID	2 ug/l Method 625 5.0 ug/l Method 524.2	0.2 ug/l Method 610 HPLC		Method 8270D ³
o. Phenanthrene - 85018 -		5 ug/l Method 625	0.05 ug/l Method 610 HPLC		Method 8270D ³
p. Pyrene - 129000 -		10 ug/l Method 625	0.05 ug/l Method 610 HPLC		Method 8270D ³
37. Total Polychlorinated Biphenyls (PCBs) ¹⁰	0.5 ug/l Method 608				0.00005 ug/l Method 1668a ¹¹
Inorganic parameters:		Minimum Levels (ug/l) and Test Methods			
		Flame Atomic Absorption	Inductively Coupled Plasma	Furnace Atomic Absorption	Other
38. Antimony		200 ug/l	50 ug/l	5 ug/l	
39. Arsenic			5 ug/l	2 ug/l	
40. Cadmium		10 ug/l	5 ug/l	0.5 ug/l	

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Inorganic parameters:	Minimum Levels (ug/l) and Test Methods			
	Flame Atomic Absorption	Inductively Coupled Plasma	Furnace Atomic Absorption	Other
41. Chromium (total)	Method 218.1	10 ug/l Methods 200.7 ¹¹ , 200.8, 200.15, 1620	5 ug/l Method 200.9	50 ug/l
42. Chromium (hexavalent)				10 ug/l Method 218.6 Method 1636
43. Copper	20 ug/l	5 ug/l	3 ug/l	
44. Lead	100 ug/l	40 ug/l	3 ug/l	
45. Mercury				0.2 ug/l
46. Nickel	30 ug/l	10 ug/l	5 ug/l	
47. Selenium		50 ug/l	5 ug/l	
48. Silver	50 ug/l	10 ug/l	2 ug/l	
49. Zinc	30 ug/l	10 ug/l		
50. Iron		Methods 6010b 200.7 ¹²		

1. Minimum Level (ML) is the lowest level at which the analytical system gives a recognizable signal and acceptable calibration point for the analyte. The ML represents the lowest concentration at which an analyte can be measured with a known level of confidence. The ML is calculated by multiplying the laboratory-determined method detection limit by 3.18 (see 40 CFR Part 136, Appendix B). Where a minimum level (ML) is listed but a test method is not specified, permittee may use any of the available methods approved for use under 40 CFR 136, including alternatives approved by this permit, that meets that ML. See EPA's "Methods and Guidance for the Analysis of Water" at www.epa.gov/water/owrcatalog.usf. Where test method is specified but ML not listed for that method, the lowest ML for listed methods must be used before concentration can be considered as "non-detect."

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2. For measuring volatile organic compounds, Method 8260C (or the latest version) may be used as a substitute for CWA Methods 524.2, 602, 624, or 1624. Method 8260C must be preceded by Method 5030 as the preparation method. However, any method changes must be accompanied by documented quality assurance quality control (QA/QC) test results to prove that the analytical process can achieve the lower detection limits of Method 8260C.

3. For measuring semi-volatile organic compounds, Method 8270D may be used as a substitute for Methods 610, 625, or 1625. Method 8270D must be preceded by Method 3535 or Method 3520C as the sample preparation method. In either case, the quality control requirements of Method 3500B must be taken into account. The sample preparation method must be specified with data analysis records. Method 8270D may be modified to provide lower detection and quantitation limits using Selected Ion Monitoring (SIM). Any method changes must be accompanied by documented quality assurance quality control (QA/QC) test results to prove that the analytical process can achieve the lower detection limits of Method 8270D.

4. GC - gas chromatography

5. GCMS - gas chromatography/mass spectrometry

6. LC - high pressure liquid chromatography

7. Flame Atomic Absorption

8. For measuring fuel oxygenates, Method 602 must be modified to include a heated purge.

9. The sum of individual phthalate compounds.

10. In the November 2002 WQC, EPA has revised the definition of Total PCBs for aquatic life as *"total PCBs is the sum of all homologue, all isomer, all congener, or all Aroclor analyses"*.

11. Method 1668a (HRGC/HRMS) has been proposed by EPA and is currently being validated. When approval of the method is finalized, it will be approved for use with this general permit.

12. Methods 6010b and 200.7 for metals may only be used when sample prepared with SW-846 digestion method, Method 3010.